



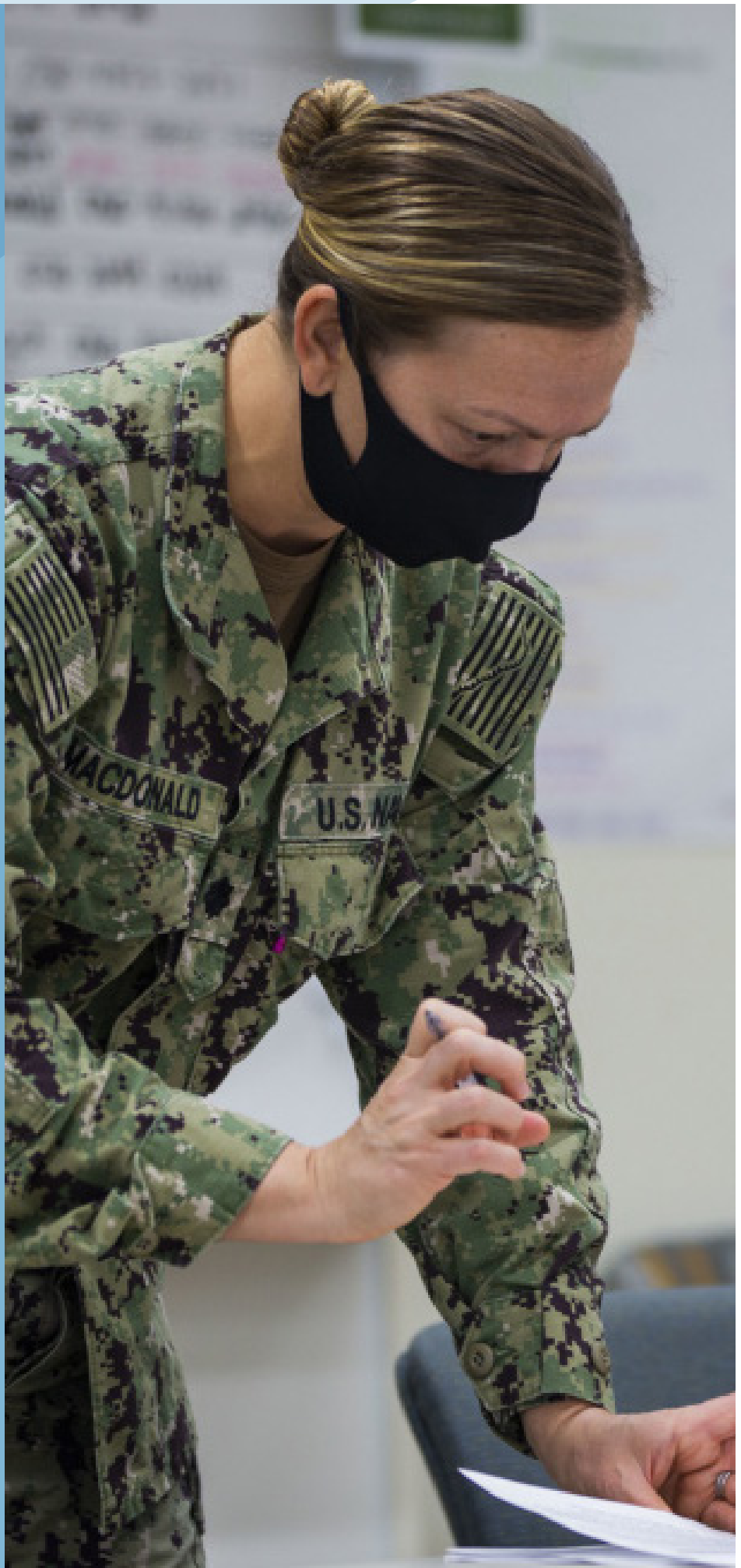
# TSNRP NEWS

*Fostering Excellence in  
Military Nursing Science*

**SPRING 2021**

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Scholarly Development & Opportunities  
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Kudos





## FROM THE EXECUTIVE DIRECTOR

Dear Colleagues,

During this historic year as the coronavirus pandemic continues, the TSNRP team has embraced the virtual world and we have continued to offer many of our courses, as well as new educational opportunities, on virtual platforms: Writing Workshop Series, Evidence-Based Practice Workshop, Post Award Workshop, mini-EBP Reviewer Training, Nursing Grand Rounds, Dissemination Course, and the recent Women in Combat Summit. While I know many of you are experiencing Zoom and Teams fatigue, I am grateful for each one of you who continue to connect, contribute, and collaborate in our virtual events. I continue to be impressed with military nurses who relentlessly continue on with research, EBP projects, writing journal articles, presenting at conferences, sharing expertise, collaborating on projects, and mentoring others-despite travel, meeting, and research restrictions imposed by COVID-19. Challenges I'm realizing inspire us to grow in ways we would not otherwise be motivated to do so. One of the positive outcomes of the virtual course offerings is the development of the virtual poster and speaker galleries at two of our recent course offerings. We hope to even further advance this capability in the future, so that we can provide nurses with more resources to review previous presentations, facilitate collaborations, and create educational offerings.

As we continue to navigate the ongoing pandemic, we plan to continue virtual course offerings until in-person travel is safe. We are tentatively planning to return to in-person courses later in the year, with a back-up plan to offer these courses virtually if required per DoD/CDC travel guidance. For this reason, the TSNRP Dissemination Course has been scheduled for September 13-16, 2021, and will host our strategic planning meeting immediately prior to the course on September 12, 2021. The strategic planning meeting will allow representatives of the TSNRP community to critically consider the goals, objectives, activities, and future path for TSNRP. We truly look forward to this important event and to meeting at future events when in-person travel is safe.

Last October, we were grateful to receive the wonderful news that TSNRP would receive bridge funding over the next year. In response to this news, we immediately put out the FY21B early call for applications. I was excited to see the overwhelming number of rigorous applications which address important areas of military nursing science, and will contribute to the military healthcare system as well as those entrusted to our care. The bridge funding also allowed us to have an additional call for mini-EBP awards. Eleven projects relevant to TSNRP funding priorities (Force Health Protection, Nursing Competencies and Practice, Leadership, Ethics, & Mentoring) were selected for funding. I am thrilled nurses are taking advantage of this opportunity and that TSNRP funding can provide tangible support to implement evidence into military nursing practice environments. Lastly, the bridge funding will allow TSNRP Research Interest Groups to collaborate on projects of interest. The collaboration that happens within the TSNRP RIGS really is inspiring-particularly as many of the RIGs include mentees and junior nurses to develop the scholarship of the next generation of military nurses.

I am so pleased to share the wonderful news that TSNRP funding has been restored. I want to personally thank the TSNRP Executive Board of Directors, military nursing leaders, national nursing organizations, USU leaders, active duty and retired military nurses, and many others who supported TSNRP over the past couple of years through this challenging time. I am thrilled to continue to offer military nurses future opportunities to fund important research and evidence based practice projects that make a difference for our service members and their beneficiaries.

Some staffing news to share is our previous grant manager, Ms. Kesha Chandler has accepted a new employment opportunity that will provide professional career growth. Ms. Chandler served as a TSNRP grant manager for the last two years and did an exceptional job. We are so grateful for her contributions to TSNRP. It was bittersweet for the TSNRP staff as we said goodbye to a wonderful colleague, but we are so happy for her future success!

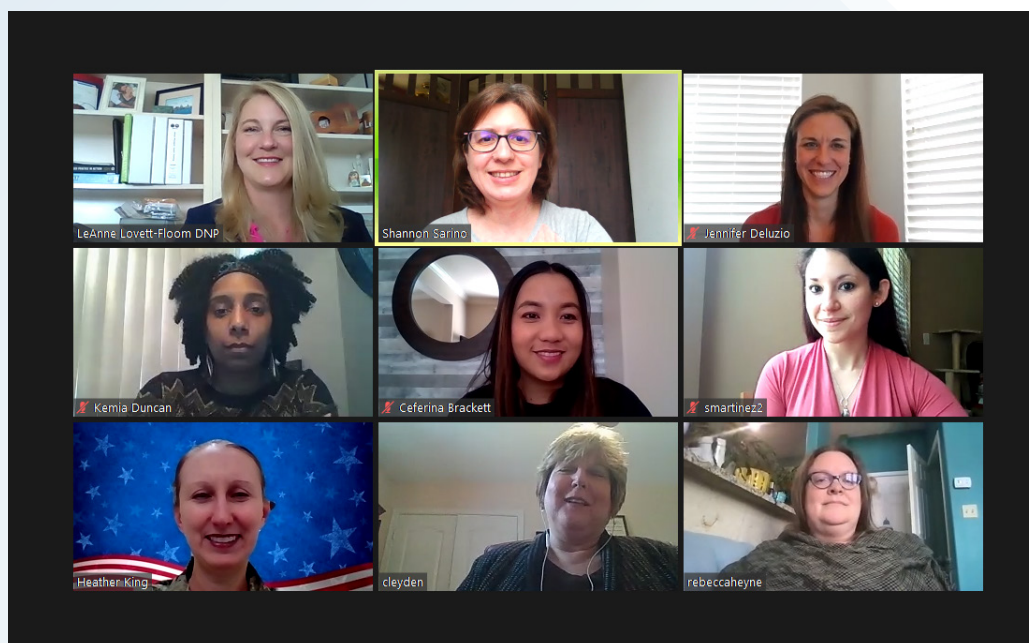
We warmly welcome our new TSNRP grants managers - Jennifer Deluzio and Stephanie Martinez. Both Jennifer and Stephanie are exceptional grants managers already and have been wonderful additions to the team. Ms. Deluzio previously served as a research coordinator, and Ms. Martinez has extensive grant management experience. We look forward to working with both Jennifer and Stephanie and are grateful to have found such motivated and dedicated individuals.

I continue to be grateful for the continued support of the TSNRP community and Nurse Corps leaders as our program has endured some funding reductions and uncertain future funding. My intention is to continue to work to ensure TSNRP continues and to honor the vision of the founders of TSNRP and Senator Daniel K. Inouye.

Every day as TSNRP Executive Director is truly an honor and I look forward to 2021 and serving the TSNRP community!

*Heather King*

CAPT Heather King, PhD, CRNA, USN, NC



The TSNRP team has been virtual for the last year, but we remain committed to the important work we do supporting military nurses and their research and EBP projects every single day. We look forward to seeing you in person at upcoming TSNRP courses, and returning to our office this fall!

# DARPA SERVICE CHIEFS' FELLOWS PROGRAM

*LTC Young Yauger, PhD, CRNA, AN, USA*

The Service Chiefs' Fellows Program (SCFP) is a crucial DARPA program that helps the agency target the most effective research projects to pursue while raising awareness of the agency's technological advancements in the wider Department of Defense (DoD) community. The SCFP is a 3-month immersive program that facilitates the exchange of boots-on-the-ground knowledge from the Fellows to DARPA program managers and directors. At the same time, the program offers Fellows unparalleled personal and professional enrichment while opening pathways for the potential transition of cutting-edge technologies to DoD organizations. The personal connections forged by way of the SCFP mutually serve DARPA and the U.S. Army well into the future.

The Fellowship program is fast-paced with a rapid onboarding process and orientation on the mission, vision, structure, funding, and lifecycles of DARPA programs. Directors of the agency's six technical offices convey the vision and goals of their respective offices as they collectively provide briefs on more than 200 active programs. These range from programs with promise for near-term deployment to longer-term programs on the verge of science fiction. After these briefings, Fellows select a few programs to follow over the next few weeks as a way to take a deeper dive into the DARPA innovation process.

The Bridging the Gap program, for example, leverages novel concepts and technology to discover new approaches to treating spinal cord injury. If successful, this program could lead to ways of curing paralysis due to spinal injuries. Another example is The Hand Proprioception and Touch Interfaces (HAPTIX) program, which successfully integrated upper-limb prosthetics into the nervous system of patients. This technology enables the recovery not only voluntary



LTC Young Yauger is an Assistant Professor at the US Army Graduate Program in Anesthesia Nursing. He participated in the DARPA 3-month program in late 2020.

movement, but also the sensation of touch through sensors built into the prosthetics. Equally amazing is the Atmospheric Water Extraction (AWE) program, which could ultimately lead to self-refilling water canteens for soldiers. The boost to combat capabilities and the reduction of logistical footprint of this project could be revolutionary. These are just three of the hundreds of ongoing programs at DARPA.

Do you have operational experience? Are you imaginative, innovative, and motivated to see changes in your technical area? Do you have excellent communication and networking skills? The DARPA application process begins with the HRC ALARACT message announcing the application window for a given quarter. Typically, two Fellows are selected from all applications received by each quarterly deadline. Due to COVID-19, the program now only accepts one Fellows per quarter.

If the SCFP and rewarding experience it offers appeal to you, please go to the Service Chiefs' Fellow Program webpage below or contact me for questions.

## 2021 FELLOWSHIP DATES

June 29 - 17 September 2021

September 21 - December 17 2021



DEFENSE ADVANCED  
RESEARCH PROJECTS AGENCY

[www.darpa.mil](http://www.darpa.mil)

# IMPLEMENTING AN EVIDENCE-BASED PRACTICE MINDFULNESS PROGRAM IN THE WORKPLACE TO AFFECT ATTENTION, STRESS, AND RESILIENCE FOR NURSING

*Maj Holly Holko, NC, USAF*

Nurses cope with diverse situations that require accurate and timely decisions. Lapses in attention increase the risk of serious consequences such as medication errors, failure to recognize life-threatening signs and symptoms, and numerous patient safety issues. Research shows that stressors inherent to nursing can lead to depression, reduced job satisfaction, psychosocial distress, and disruptions to personal relationships. With an aim towards high-reliability organizations and transformational leadership, the military health system must be creative with acquisition efforts, such as mindfulness-based programs, to protect their human capital investment.

This evidence-based practice initiative sought to address attention, stress, and resilience by implementing a brief mindfulness program in the workplace for inpatient nursing staff. The PICO question applied included: In (P) nursing, how does implementation of a (I) workplace mindfulness-based stress reduction program (C) compared to current practice affect (O) attention, stress, and resilience? A literature search was conducted in PubMed and psychINFO databases. In the literature, mindfulness interventions were shown to improve perceived mental and physical health, increase worker productivity and decrease staff turnover.



Maj Holko was awarded a TSNRP Mini-EBP Award to complete this project.

# IMPLEMENTATION OF WORKPLACE MINDFULNESS TO AFFECT ATTENTION, STRESS, AND RESILIENCE IN NURSING

Major Holly A. Holko, MSN, RN, Clinical Inquiry in Nursing Readiness Fellow  
711th Human Performance Wing, Wright-Patterson AFB, Ohio

# AFRL

## Background

- Nursing requires accurate & timely decisions
- Lapses in attention increase safety risks
- Stressors lead to depression, reduced job satisfaction, psychological distress & disruptions to relationships
- With focus on high-reliability organizations & transformational leadership, the military health system must be creative with acquisition efforts to protect their human capital investment

## Significance

- Mental health causes absenteeism & long-term disability = \$1 trillion in productivity loss
- 41% nurses reported being "unengaged"
- 40% nurses plan to leave nursing as a consequence of stress
- 43% newly graduated nurses leave in first 3 years
- Nursing shortage projected to be 1.13 million by 2024
- Untreated anxiety & depression costs society \$1.15 trillion

## AFI 90-5001 Comprehensive Airman Fitness (CAF)

- Holistic, strength-based, integrated framework
- Role in sustaining a fit, resilient, & ready force
- Leaders and individuals are to understand, support, & promote the CAF framework
- Linked to MTF priorities

Table 1.1 Comprehensive Airman Fitness Domains and Tenets	
Fitness Domain	Domain Tenets
Mental	Awareness - Adaptability - Decision-Making - Positive Thinking
Physical	Endurance - Recovery - Nutrition - Strength
Social	Communication - Connectedness - Social Support - Teamwork
Spiritual	Core Values - Perseverance - Perspective - Purpose

## PICO

**P:** Nursing  
**I:** Workplace mindfulness-based training program  
**C:** Current Practice  
**O:** Attention, Stress, Resilience

## Workplace Mindfulness Synthesis Table

T, I, -, NE, NR, ✓ (select symbol and copy as needed)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Outcome #1 Resilience/Well-Being (i.e. CD-RISC)	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	NE	✓	NE	✓	✓	↑	↑	↑	↑	↑	↑	↑
Outcome #2 Stress Prevention (i.e. P15)	↑	↑	↑	↑	↑	↑	NE	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Outcome #3 Mindfulness Attention/Awareness (i.e. MAAS) (KMS)	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	NE	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Outcome #4 Work Performance/ Job Satisfaction (i.e. ARO) (ProQOL)	NE	↑	↑	↑	↑	↑	NE	↑	↑	↑	NE	✓	NE	✓	✓	↑	↑	↑	↑	NE	↑	↑

### SYMBOL KEY

↑ = Increased, ↓ = Decreased, — = No Change, NE = Not Examined, NR = Not Reported, ✓ = applicable or present

## So What

Mindfulness aids 20% increased productivity = \$22K savings/employee year  
Mindful Organizing supported a 13.6% turnover decrease = \$169K to \$1M savings  
Every dollar invested in wellness = \$3-\$4 dollar return on investment

Regular use of mindfulness can support decreased stress and improved awareness and resilience.

## Workplace Mindfulness Interventions Synthesis Table

T, I, -, NE, NR, ✓ (select symbol and copy as needed)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Face to Face Delivery	✓	✓	✓	✓	✓	✓	NE	✓	✓	✓	✓	NE	✓	✓	✓	✓	✓	✓	✓	NE	✓	✓
Online/Technology Supported	✓	✓	NE	NE	NE	NE	✓	✓	NE	✓	✓	NE	✓	✓	✓	✓	NE	NE	NE	✓	✓	✓
Self-Guided	✓	✓	NE	NE	NE	✓	✓	✓	✓	✓	✓	NE	✓	✓	✓	✓	✓	NE	NE	✓	✓	✓

### SYMBOL KEY

↑ = Increased, ↓ = Decreased, — = No Change, NE = Not Examined, NR = Not Reported, ✓ = applicable or present

Scan QR Code to view references.



## Search Strategy

- PubMed, PsycINFO
- Key Words; Nursing, workplace, mindfulness, mindfulness-based stress reduction, brief version, attention, stress, resilience

## Evidence-Based Recommendation

Based on the evidence, the EBP recommendation is to implement a brief workplace mindfulness program, such as a Mindful Gym for inpatient nursing.

## Implementation & Sustainment Plan

- Funded Tri-Service Nursing Research Program Grant
- Configured equipment in unused space "Mindful Gym"
- Updated 88 MDG Med-Surg Unit Checklist to ensure "Power-15's" or "P15's" assigned each shift
- Charge Nurse assigned 3 groups of 15-minute rotations during fatigued hours, 1400-1500L
- Staff exercised daily mindful activities during Power-15
  - Audio Guided Meditation, Aromatherapy, Chair Massage, Mindful Breathing & Stretching, Relaxation

## Preliminary Discussion of Outcomes

- Approved IRB, used validated & reliable tools (n = 47)
- Perceived Stress Scale (PSS)
  - Pre - 17.6 30 days Post - 14.6 = ↓ Stress
  - (Ranges 14-26 = Moderate Stress)
- Mindfulness Attention Awareness Scale (MAAS)
  - Pre - 3.8 30 days Post - 4.0 = ↑ Mindfulness
  - (Average Undergraduate Scores 3.85)
- Connor-Davidson Resilience Scale (CD-RISC)
  - Pre - 70 30 days Post - 76 = ↑ Resilience
  - (US General Population = 82, Air Force & Army Recruits = 78, General Nurses 66.5)

Statistical analysis showed clinical significance

## Dissemination

Shared with 88 MDG, Premier Health, Ohio State University  
Selected for Tri-Service Nursing Research Program  
Dissemination & European African Medical Nursing Exchange Conference

THE AIR FORCE RESEARCH LABORATORY

### Disclaimer

The views expressed herein are those of the authors and do not reflect the official policy or position of the Department of Defense, or the US Government. The authors are employees of the US government. This work was prepared as part of their official duties. Distribution A - Public Release.

This poster information was presented at the 2020 TSNRP Research and Evidence-Based Practice Dissemination Course.

# OVERCOMING RESEARCH CHALLENGES DURING A PANDEMIC: PERSPECTIVES OF A PhD CANDIDATE & SCIENTIFIC MENTOR

*COL (ret) Cheryl Elliott-Dawe, PhD(c), RN, CNOR, AN, USA*

*COL (ret) Julie Zadinsky, PhD, RN, AN, USA*

COVID-19 impacts all aspects of our daily lives. How we work, travel, shop, attend school, care for children and seniors, as well as gather at various events is more complicated. Conducting research during a pandemic can be equally challenging. I obtained Institutional Review Board (IRB) approvals and received a TriService Nursing Research Program (TSNRP) award for my dissertation research at Augusta University (AU) in 2020. However, when the COVID-19 pandemic hit, my carefully crafted research plans for developing a psychometrically sound instrument to measure perioperative synergy were abruptly disrupted.

Synergy in perioperative services occurs when all component areas of the system support and enhance one another, resulting in efficiency and high-quality outcomes. Synergy emerges from the tactical allocation of resources and effort to areas most in need. To have uniformly high-functioning, synergistic operating rooms (OR), managers need an instrument that aids identification of specific deficiencies and areas for attention. Given current efforts to integrate medical resources across all three military Services, the index could help standardize management across medical facilities. Once developed, the perioperative synergy index could aid all perioperative managers, military and civilian, in their efforts to achieve high functioning ORs.

My dissertation proposal called for the development of the instrument in three phases. The first two



COL (ret) Elliott-Dawe and COL (ret) Zadinsky conducted their research at Augusta University.

phases of this effort required input from panels of perioperative experts to establish content validity, clarity, and meaning for items that represent the past 20 years of research on high functioning ORs. The final phase was designed to establish the reliability and construct validity of the instrument through use of a national survey of 1,000 perioperative personnel. These personnel will be asked to rate their level of agreement with the items on a 6-point Likert scale regarding how each item pertains to perioperative services in their hospital. Distribution of the survey to perioperative nurses and nurse anesthetists will be done through two perioperative professional organizations. The expert panelists and national organization members are all frontline healthcare employees.

Challenges that were either brought on or exacerbated by the pandemic pertained to: (a) adjusting to new research protocols developed by the institution to protect study participants and researchers, (b) working from home, (c) identifying conferences and ways to disseminate research findings, and (d) surveying

experts who were frontline healthcare responders to the pandemic. These challenges increased the time required to move forward and necessitated the development of strategies to stay on time for completion of phases one and two of the research. Similar challenges to complete the research within the PhD program and TSNRP grant timeline are expected for the final phase that has just begun.

Similar to other leading universities across the U.S. in response to the COVID-19 pandemic, AU initiated a series of guidelines to pause non-essential research starting in late March 2020. As part of these changes, non-essential research, such as my dissertation study, was moved to remote or virtual communications with research participants. Plans had to be modified, submitted, and approved by the IRB to meet the new research guidelines. Meetings with the expert panel and distribution of incentive gift cards for phases one and two had to change. Face-to-face meetings were not permitted, so virtual meetings were held. Invitations to complete online surveys during the first two phases were emailed to the experts. Instead of distributing incentives and collecting acknowledgement receipts from participants following face-to-face meetings, incentives were mailed, and receipts were collected electronically.

AU initiated telework and eliminated face-to-face meetings. While working from home saved travel time, the move to a virtual environment brought difficulties. There was a loss of personal connections; although available for consultation through virtual means, I could no longer meet face-to-face with my major advisor, committee members, and others at the university. In an effort to stay connected and continue my research, I invested time to learn new meeting software.

Working from home includes distractions and interruptions such as neighborhood kids playing, dogs barking, vehicles driving by, and lawns being mowed. Other distractions include family and pets.

Strategies adopted to combat these distractions and interruptions were designating a private space within my home to hold meetings; using headphones or earbuds; setting limits and expectations for availability with family members; and setting a schedule of work, family, and home time.

Living in a rural area, cable and fiber-optic broadband connection to the internet are not available. Instead, I must rely on slower broadband services provided by satellite. Activities people are doing virtually such as telework, education, videos with loved ones, and entertainment streaming are high-bandwidth undertakings. The increased daily demand for broadband caused many carriers to slow data speeds, making downloads and video quality less reliable. Fortunately, my residence is only a 30-minute drive from the university, and the College of Nursing was able to provide office space for better connectivity when necessary.

Many planned conferences were cancelled or became virtual. To meet the goals of the grant, additional options for dissemination of results from the initial phases of the research were explored. Links to conferences on health systems research were found through online nursing research communities. Although identifying other conferences and securing approvals took additional time and energy, doing so came with benefits. Virtual conferences were less expensive, required no travel, and typically offered lower registration fees. Without the need for travel and hotel accommodations, I was able to attend a greater number and variety of conferences at the national level. This broadened my knowledge of ways to conduct health systems research, provided me with some ideas for future studies, and allowed for networking with other researchers with similar interests.

A final challenge: the survey subjects in the first two phases of the research are frontline healthcare employees at an academic medical center. These

perioperative experts were busy caring for patients in a rapidly changing environment. Because there was little personal face-to-face interaction with the experts, I was unable to develop a strong rapport to build trust and buy-in. Fortunately, connections with key personnel at the academic medical center were forged through a previous project. Their trust in me as a perioperative expert and their endorsement of the project facilitated buy-in from the expert panel participating in the study. Even with the support, more time-consuming methods of communication such as phone calls, emails, and virtual meetings had to be adopted. In the face of COVID-19 challenges, the panels of perioperative experts demonstrated great fortitude and dedication to this research. Some participants were so committed to the research, when faced with work demands, they reached out to request more time to complete the survey. In response, the survey's run-time was increased from two to four weeks.

The final phase of the research requires surveying perioperative nurses and nurse anesthetists from across the nation. Two potential challenges are anticipated. First, frontline healthcare employees may be less likely to respond to the survey because of working long hours in demanding environments and being inundated with COVID-related research requests. Understandably in these trying times, completion of a research survey may not be a top priority. It is possible there will be fewer and less

thoughtful responses. I addressed this challenge by including the purpose of the research and emphasizing its importance in a cover letter for the survey. We hope perioperative service professionals will connect with the research purpose and want to help develop an instrument to assist in the management of perioperative services.

The second potential challenge is the possibility of a shift in healthcare employees' views of what constitutes high performing perioperative services as a result of the pandemic. One idea we considered to address this challenge was to ask respondents if they thought the pandemic influenced their responses, and if so, how. However, the additional questions are outside the scope of the study's intent and require another review from the IRBs. Instead, participants will be asked to rate their level of agreement to survey items on a 6-point Likert scale regarding how well each item pertains to perioperative services in their hospital prior to the pandemic.

The overall effect of the pandemic is a slowed progression for all phases of the research. Very little progress could be made without frequent communication, adaptability on the part of many individuals, and the support of a team of dedicated professionals. We are grateful to all who supported and will support the development of this important evaluative instrument.

# EBP ENHANCING OPERATIONAL READINESS: ULTRASOUND GUIDED IV PLACEMENT

*LCDR Justin Hefley, NC, USN*

Gaining and maintaining intravenous access for fluid resuscitation on the battlefield is a lifesaving measure of critical importance to the U.S. Military when battlefield injuries occur. Damage Control Resuscitation (DCR) seeks to control ongoing bleeding and replace circulating fluid volume to prevent or mitigate end-organ tissue damage. The Department of Defense (DoD) Center of Excellence for Trauma's Joint Trauma System (JTS) states "Hemorrhage is the leading cause of preventable death on the battlefield. Damage Control Resuscitation was developed to work synergistically with Damage Control Surgery and prioritizes non-surgical interventions, which may reduce morbidity and mortality from trauma and hemorrhage." Nurses play a vital role in quickly initiating large-bore peripheral intravenous (IV) access to initiate fluid resuscitation.

It is estimated that 24% of fatal battlefield injuries from 2001 to 2011 were potentially survivable (Eastridge, et al., 2012). One of the core provisions of The National Defense Authorization Act for Fiscal Year 2017 (H.R. 4909; NDAA 2017, Pub.L. 114-328) (2017) is to ensure the development of a trained and ready healthcare team. Ultrasound Guided IV (USGIV) placement by nurses is a skill that can be easily trained and increases the ability of nurses to place IV catheters when placement is technically difficult using the standard palpation technique. If this therapeutic modality is to be utilized in theater, then it must be taught and trained at medical treatment facilities. Failed initial attempts at large-bore IV access can result in either the placement of



■ Lcdr Hefley is the Site Director, NMCCCL RNA Program, Uniformed Services University of the Health Sciences.

intraosseous access lines or placement of a central line catheter, but both options have drawbacks that will be discussed.

## **Why use a peripheral IV (PIV)?**

The flow through an IV catheter can be approximately determined with the Hagen-Poiseuille equation. The four main factors are the pressure gradient from the proximal to distal end of the tubing, the radius of the tube, the length of the tube, and the viscosity of the fluid. So faster flow rates will be achieved with higher pressure across a catheter that is short and large bore with a less viscous solution. The Emergency Trauma Medicine Course (Buck, 2016) observationally tested the flow rates through common catheters used for resuscitation in the U.S. and their findings match what we would expect from the Hagen-Poiseuille equation. As we can see, the larger the gauge of peripherally inserted IV catheters the faster the time to deliver IV fluids. Tactical Combat Casualty Care (TCCC) and the JTS recommend the use of an intraosseous (IO) device if IV access is not feasible or obtained quickly (Committee on Tactical Combat Casualty Care, 2020). How does the flow rate through an IO catheter compare to that of IV catheters? The EZ-IO manufacturer has published flow rates of 6.3 L/HR for humerus catheters and 1L/HR for proximal

# Enhancing Operational Readiness with Ultrasound

**PROBLEM STATEMENT:** Intravenous(IV) catheter initiation is a critical life-saving skill in combat. Alternatives to IV catheters have disadvantages that can delay the start of rapid hydration and resuscitation or slow the process down significantly.

**DESCRIPTION:** Nurses and corpsmen need to be trained in the utilization of ultrasound to place IV catheters when traditional palpation methods do not work. This skill is easy to perform when properly trained and can be the difference between life and death when seconds count.

**NAME:** Justin Hefley, DNP, CRNA

**AFFILIATION:** Uniformed Services University of the Health Sciences

**NATIONAL DEFENSE STRATEGY THEMES:** *Deliver performance at the speed of relevance, Cultivate workforce talent*

**KEYWORDS:** Ultrasound, IV, Operational Readiness

## ADDITIONAL DETAILS

- Ultrasound machines are commonly found in forward deployed environments to aid in the rapid detection of deleterious internal bleeding (eFAST exam), undifferentiated hypotension (RUSH exam) and to place central line catheters.
- Smaller, more mobile units can also benefit from one of the ultra-portable units such as the Butterfly IQ®
- Ultrasound training is simple, effective, and can be instituted at home to save lives abroad.



LCDR Hefley's Quad Chart for his EBP Project.

tibial catheters. Using the chart below, this would be 9.52 minutes to infuse 1000ml at the humerus and 60 minutes to infuse the same volume through the proximal tibial site (Teleflex, n.d.). These rates are orders of magnitude slower than an IV route. In an emergency, if IV placement is difficult, this would hasten the onset of initiation of fluid resuscitation. Large bore Rapid Infusion Catheters (RIC) are the fastest method of delivering fluids to a patient and can be placed by a nurse with proper training. Of the four fastest methods of resuscitation, three of them can be placed by nurses.

## Why not a central line?

A central line catheter is a large bore catheter placed in the internal jugular, subclavian, or femoral vein that provides a conduit for rapid fluid delivery and is often used when PIV or IO access cannot be obtained. It can be used to infuse vasoactive medications or

medications that might be caustic if a PIV were to become infiltrated. These catheters can be valuable but are associated with a 5% to 19% complication rate that includes: infection, bacteremia, thrombosis, and pneumothorax (Tsotsolis, et al., 2015; Kornbau, Lee, Hughes, and Firstenberg, 2015). These catheters must be placed by personnel with advanced training (such as an Advanced Practice Registered Nurse [APRN] or a physician), and in battlefield trauma situations where staff is limited. This procedure can occupy valuable time that could be spent performing other procedures that are medically necessary. For these reasons, this modality should be reserved for when PIV access is unobtainable or when their use is specifically indicated by the situation.

## EBP Project Description

There is an ongoing multi-site Evidence-Based Practice (EBP) project at Naval Hospital Jacksonville

and Naval Medical Center Camp Lejeune where an ultrasound guided IV start pathway for nurses and corpsmen is being implemented. In this EBP project, we provide didactic education coupled with kinetic ultrasound training to increase the utilization of ultrasound and improve the knowledge, skills, and attitudes of our active-duty service members

at home and abroad. The aim is to show whether this intervention increases the success rate of IV placement, decreases pain with insertion, and to train nurses and corpsmen with a valuable skill on the battlefield and at home. Our team looks forward to disseminating the results of this project.

#### Reference 1:

SIZE	TYPE	1000ML INFUSION TIME
8.5 Fr	RIC Line	0:46 sec
7 Fr	RIC Line	1:00 sec
8.5 Fr	Sheath Introducer	1:05 min
14 Ga	Sheath IV Cannula	1:30 min
6 Fr	Sheath Introducer	2:10 min
14 Ga	Anigocath (13.3cm) IV	2:10 min
16 Ga	Standard IV Cannula	2:20 min
18 Ga	Standard IV Cannula	4:23 min
14 Ga	4-Lumen CVC	5:20 min
20 Ga	Standard IV Cannula	6:47 min

### DID YOU KNOW?

***The TSNRP Resource Center can provide textbooks, software licenses, and other resources that can be used at individual military facilities and within military organizations to support nursing research and evidence based practice.*** And TSNRP has also developed an “Outreach Kit” containing informational bookmarks, pens, notebooks, and other TSNRP-branded materials that can be used to tell others in your organization about TSNRP—perhaps at facility orientation or a staff meeting, or as a gift to incoming nurses.

The resources and the Outreach Kit items serve to fulfill an important strategic goal of TSNRP: to provide a tri-service infrastructure to enhance military nursing research and advance evidence based practice.

You can find both the TSNRP Resource Request Form and the Outreach Kit Request Form on the TSNRP website at [www.usuhs.edu/research/centers/tsnrp/education/resource-requests](http://www.usuhs.edu/research/centers/tsnrp/education/resource-requests).

# TSNRP RESEARCH INTEREST GROUPS: FORGING AHEAD IN 2021

*Emily Bell, Nursing Program,  
Research Interest Group Coordinator*

The TriService Nursing Research Program (TSNRP) is honored to support six Research Interest Groups (RIGs) comprised of nurse scholars dedicated to military nursing research and the translation of new knowledge into military nursing practice. The RIG members are experts in six specialty areas: anesthesia, biobehavioral, expeditionary, military family, health systems and informatics, and military women's health research.

## **In developing the 2021 Annual Plan, RIG leaders outlined the following efforts for 2021:**

The **Anesthesia RIG (ARIG)** strives to act as a comprehensive source of support for researchers and clinicians seeking to answer anesthesia-related research questions and translating current evidence into practice. The ARIG welcomed new leadership for 2021: LTC Young Yaeger, AN, USA; Maj Megan York, NC, USAF; CDR Ryan Nations, NC, USN; and LTC Peter Attilio, AN, USA who will be leading the ARIG team. The ARIG partnered with the Expeditionary RIG to conduct a research study exploring the feasibility of a multiple use endotracheal tube (ETT) scenario. This study assessed the durability and disinfectant efficacy of ETT with results expected to be published in 2021. Additionally, the ARIG plans to create a database (MEMOIR project) to capture memories/experiences of certified registered nurse anesthetists (CRNAs) during the COVID-19 pandemic.

The **Biobehavioral Health RIG (BHRIG)** plans to support behavioral health clinical inquiry in both generating the body of military behavioral health



Family Research Interest Group (FIG) leaders gathered at the Military Health System Research Symposium in 2019. We can't wait for RIG members to be able to meet in person this year at Dissemination Course!

science and translating behavioral health evidence into practice. The BHRIG welcomes new leadership for 2021: Lt Col Sarah Huffman, NC, USAF; and CDR Jane Abanes, NC, USN. The BHRIG partnered with the Joint Trauma System (JTS) to develop a Clinical Practice Guideline (CPG) on forward management of acute behavioral health conditions. The BHRIG also plans to conduct a Likert Scale methodology project to provide expert guidance on appropriate use and development of Likert Scales. This project brings value to all nurses who frequently utilize Likert Scales in Research and Evidence-Based Practice (EBP) projects. Additionally, the BHRIG plans to offer a Likert Scale webinar for CE credit on the RIG website.

The **Expeditionary RIG (ExRIG)** strives to ensure that expeditionary science and EBP initiatives remain operationally relevant and visible to military leaders and policy makers. The ExRIG is collaborating with the ARIG to finish a research study exploring the durability, feasibility, and disinfectant efficacy of multiple ETT reuse in an austere environment.

In addition, the ExRIG is collaborating with JTS to update the Prolonged Field Care (PFC) Clinical Practice Guideline (CPG). The ExRIG is also working on the development of the nursing knowledge, skills, and abilities (KSA) blueprinting with the DHA Nursing Readiness Working Group and the JTS. ExRIG leaders will continue providing mentorship and recruitment of junior nurse corps officers with expeditionary experience or interest in the RIG.

The **Military Family RIG (FIG)** aims to expand the foundation of knowledge upon which expert practices can be built to improve the health of the military family. The FIG welcomes new leaders for 2021: MAJ Wendy Hamilton, AN, USA and LT Dehussa Urbietta, NC, USN. Additionally, LCDR Shawna Grover, NC, USN; Maj Kelley Henson, NC, USAF; and LCDR (sel) Chip LeDuff, NC, USN will join the leadership team as mentees through 2021. The FIG is collaborating with Blue Star Families on a publication for the TSNRP COVID-19 supplement to be published this year; plus planning a project to generate new knowledge within nursing and healthcare to improve the quality of life for military families. The FIG continues to collaborate with nurse scientists, civilian research teams, and academic affiliations as well as provide mentorship for research scientists and graduate students.

The **Health Systems and Informatics RIG (HSIRIG)** strives to strengthen informatics and health services knowledge sharing and standardization of efforts to enhance skills in research and EBP among military nurse scholars. The HSIRIG welcomes new leadership for 2021: RANK? Dr. Sara Breckenridge-Sproat is an incoming scientific mentor for the team

and MAJ Melissa Miller, AN, USA is an incoming Army leadership mentee. The HSIRIG plans to develop a course on analyzing data for EBP projects as well as develop templates and training resources for data analysis that will be available on the RIG website. The HSIRIG is continuing to collaborate with Uniformed Services University Graduate School of Nursing to develop a Data Science course in the PhD core curriculum.

The **Military Women's Health RIG (MWHRIG)** seeks to improve military women's health, address the unique needs of female service members, and influence healthcare policies affecting female service members. The MWHRIG welcomes a new RIG leader for 2021, Maj Angela Phillips, NC, USAF who will join the MWHRIG leadership team as the Air Force representative. The MWHRIG recently partnered with the Uniformed Services University Consortium for Women's Health in planning the 2021 "Women in Combat: How Servicewomen Enhance the Fighting Force" summit, which took place in mid-February. MWHRIG leaders plan to publish a supplement of the summit findings. Additionally, the MWHRIG will host a breakout session at the Military Health System Research Symposium for the fifth year in a row! The MWHRIG continues to collaborate with other military and civilian women's health organizations including Defense Advisory Committee on Women in the Services (DACOWITS), Office of Research in Women's Health (ORWH), Service Women's Action Network (SWAN), and the Uniformed Services University Consortium for Women's Health to further nursing knowledge and improve quality of life for military women.

# TriService Nursing Research Program

## Research Interest Groups

*TSNRP is proud to support military nurse-led RIGs, teams connecting multidisciplinary researchers with common interests for collaboration, mentoring and education.*

### ANESTHESIA

*Key Members: LTC John Yauger, CDR Kennett Radford,  
Maj Megan York, CDR Ryan Nations*

- Launching the Military Enduring Memories of Individuals Repository
- Completing Manuscript on Endotracheal Reuse/Re-sterilization Research Project
- Exploring development of an EBP Implementation Handbook for nurses in anesthesia
- Planning for member travel for mentoring and intellectual transfer

### BIOBEHAVIORAL HEALTH

*Key Members: LTC Christopher Stucky,  
CDR Jane Abanes, Lt Col Sara Huffman*

- Developed the COVID-19 Palliative Care Toolkit
- Planning a Likert Educational Series for Military Nurses
- Scoping Review on Considerations for Acute and Emergent Deployed Mental Health Patient Management and Theatre Transports
- Connecting members with educational opportunities in research methods and design, including NIH offerings

### EXPEDITIONARY CARE

*Key Members: Col (ret) Liz Bridges, COL (ret) Elizabeth  
Mann-Salinas, LTC Christopher VanFosson,  
and CAPT Virginia Blackman*

- ERC issue of Critical Care Nurse
- ERC manuscripts for submission to Clinical Simulation in Nursing
- Developing a relationship with CoERCC
- Finishing Battlefield and Disaster Nursing Pocket Guide update

### MILITARY WOMEN'S HEALTH

*Key Members: Lt Col Candy Wilson, Maj Dawnkimberly  
Hopkins, LTC Leilani Siaki, CAPT Jennifer Buechel,  
CAPT (ret) Jacque Rychnovsky, COL (ret) Lori Trego,  
and LTC (ret) Nancy Steele*

- Disseminating results from delphi study, MWH research priorities, & Scoping Review
- Hosted Women in Combat-How Women Enhance the Fighting Force Summit in February 2021
- Hosting MWH Quarterly Calls with guest researcher presentation and networking round robin
- Collaborating with other women's health and military organizations
- Women's Health Issues Journal Supplement & Women in Combat Military Medicine Supplement

### MILITARY FAMILY HEALTH /READINESS

*Key Members: CDR Abbie Yablonsky, LT Whitney Brock,  
LTC Kristal Melvin, and LTC (ret) Jan Agazio*

- Scoping review of family literature, developing a screening tool for military family literature
- Published Journal Supplement in Military Behavioral Health Journal
- Collaborating with Millennium Cohort Study Team to Examine Risk Factors for Military Families
- Collaborating with Blue Star Families to Enhance Awareness of Military Family Needs
- Hosting monthly calls for collaboration and guest speaker presentations

### HEALTH SYSTEMS/ INFORMATICS

*Key Members: CDR Lalon Kasuske, LTC Pauline Swiger,  
Lt Col Cubby Gardner, and COL (ret) Pat Patrician*

- Creating evidence summaries on key leadership topics
- Led the initiative to integrate common data elements into the MHS
- Fostering collaboration with inter-professional teams and cross-agency partners through knowledge sharing and standardization of efforts.
- Scientific Mentorship for Research Team: Developing an Evidence-Based Joint Profession

To find out more information about joining one of the TSNRP Research Interest Groups, please contact Shannon Sarino at [shannon.sarino.ctr@usuhs.edu](mailto:shannon.sarino.ctr@usuhs.edu)

# 2020 DISSEMINATION COURSE HELD VIRTUALLY

For the first time, the 2020 TSNRP Research and EBP Dissemination Course was held virtually, on Oct. 16, 2020. Continuing the TSNRP tradition of “Creating the Science, Advancing the Practice,” we were pleased to find a way to be flexible and still come together to highlight military nursing research.

Held at the Uniformed Services University and broadcast to nurses around the world, the Dissemination Course highlighted the outstanding work being performed by military nurse researchers. In keeping with tradition, the course featured both plenary sessions and a poster gallery.

**Special congratulations are extended to the abstract award winners:**

## EBP

**1st Place** - LT Ronald Rollon, NC, USN  
Using Simulation to Improve Self-Perceived Competency

**2nd Place** - MAJ Jose Rodriguez, AN, USA  
Adenosine Triphosphate-Bioluminescence Technology as an Adjunct Tool to Validate Cleanliness of Surgical Instruments

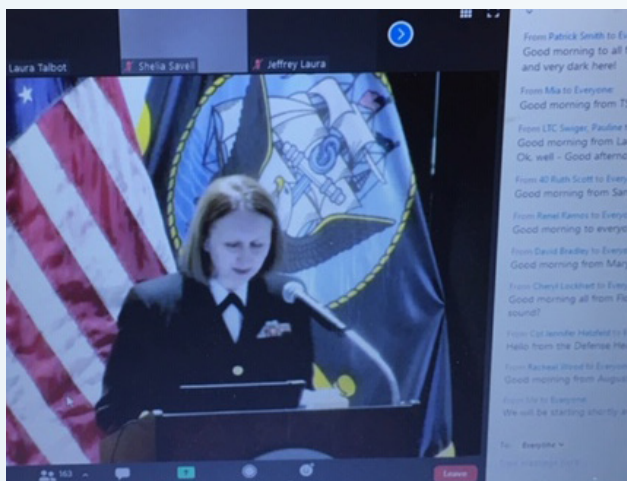
## RESEARCH

**1st Place** - CDR Jane Abanes, NC, USN  
Feasibility and Acceptability of a Brief Acupuncture Intervention for Service Members with Perceived Stress

**2nd Place** - LTC Christopher Stucky, AN, USA  
The Paradox of Network Inequality: Differential Impacts of Status and Influence on Surgical Team Communication

**3rd Place** - LTC Tanekkia Taylor-Clark, AN, USA  
Soldier-Centered Care: A Concept Analysis

**Honorary Mention** - Col Antoinette Shin, USAF, NC  
Fluid Immersion System versus Traditional Mattress for Pressure Dispersion



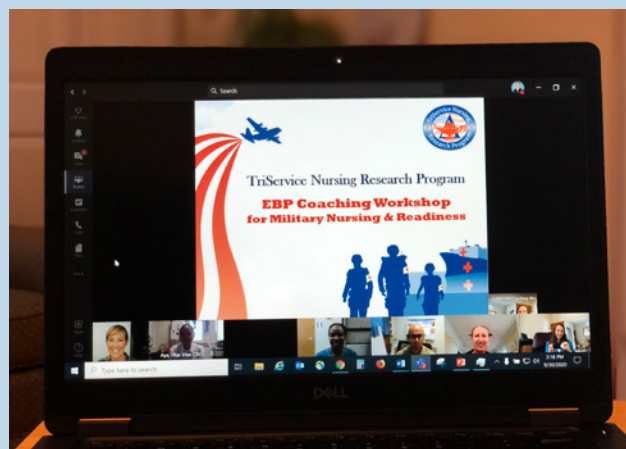
CAPT Heather King spoke to nurses around the globe during the first virtual TSNRP Dissemination Course.

The TSNRP Research and Evidence-Based Practice (EBP) Dissemination Course will be held Monday 13 September through Thursday 16 September 2021! This event will feature breakout sessions and poster sessions focused on research and EBP projects plus Research Interest Group (RIG) team meetings focused on anesthesia, biobehavioral health, expeditionary, health systems and informatics, military family and women's health.

The course will be hosted as an in-person event in San Antonio, Texas, pending DoD and CDC travel guidance. If we are unable to host an in-person event, there will be a multi-day virtual offering.

TSNRP welcomes all of Active, Reserve, Guard and retired nursing personnel as well as those working with the Military Healthcare Systems. Non-military nursing personnel may join pending available space. Please register to join us: <https://cvent.me/rqQKvA>

## TSNRP VIRTUAL EBP WORKSHOP



A virtual Evidence-Based Practice Workshop for Military Nursing and Readiness for Ramstein Air Base and Landstuhl Regional Medical Center was held via Microsoft Teams from September 29-October 1, 2020. The workshop, taught by faculty members CAPT Heather King, LTC Pauline Swiger, Maj Kelley Henson and CDR Patricia Butler, covered topics that included the steps of EBP and how to look at different levels of evidence based with article reviews. Students were also walked through step-by-step developing PICO (T) questions, and worked with mentors to develop EBP projects of their own.

This workshop was the first virtual offering from TSNRP, due to COVID-19 travel restrictions, and highlights the resilience of military nurses to continue learning even in the midst of an unprecedented pandemic.

# WOMEN IN COMBAT SUMMIT: FORGING THE FUTURE – HOW WOMEN ENHANCE THE FIGHTING FORCE

*Molly Fellin Spence*

The WIC Summit was hosted 9-11 February 2021 virtually by the Triservice Nursing Research Program (TSNRP) and USUHS Women's Health Consortium. The summit covered three overarching themes critical to the successful integration of women in the military and in combat roles. These themes included: leadership in the 21st century, operational performance, and health & well-being. The goal of the summit, according to Col Candy Wilson, PhD, was to update findings from the first WIC Summit in 2014. Specifically, to further examine gaps in care, policy, and research for service women in combat roles. She called on participants to heed the words of Dempsey to "unapologetically be a champion for women."

Currently women comprise 17% of active-duty forces, and that percentage is on an upward trajectory, according to Robert Thompson, chief of staff at the Uniformed Services University of the Health Sciences (USUHS); however, GEN (ret.) Dempsey emphasized that demonstrating diversity is only the first step. The next, and most important, step is inclusion, he said. For women, this means continued selection for positions of increasing responsibility.

Women's roles in the military are steadily increasing, a positive sign to GEN (ret) Martin E. Dempsey, former Chairman of the Joint Chiefs of Staff (JCS), but it is important to examine all aspects of the armed forces – including health care – to make sure women are treated equally. "The performance of women is equal to, and sometimes better than, their male counterparts," Dempsey said during a talk at the February 2021 Women in Combat (WIC) Summit.



Women in Combat Summit organizers gathered for a quick photo before kicking off the 3-day event.

"When we get women into positions that heretofore we denied them, we must encourage those women to stay and overcome the power imbalance" of the male-dominated institution, he said. "We will know we have succeeded when you have the first woman chairman of the JCS here as your keynote speaker instead of someone who looks like me."

As the number of female service members increases, the number of women in combat positions has also steadily risen, especially since the elimination of the Combat Exclusion Policy in the Department of Defense (DoD). "It is vitally important that the all-volunteer professional military reflect the country it serves," Dempsey said, as he gave "a history lesson" on the events leading up to elimination of the policy that had banned U.S. servicewomen from combat roles.

Dempsey announced the rescind order alongside then-Defense Secretary Leon Panetta, in January 2013. Dempsey said the policy had "a negative influence on our profession," but urged understanding that "any big cultural change in any institution takes time."

Dempsey said all service members can continue to make the institution “more equitable, fairer, more cohesive, and continue to give women the opportunity to advance.” To get there, the first obstacle to overcome is sentimentality, which Dempsey called an impediment to progress.

“A summit like this helps find actionable items to help women feel they are truly accepted as equals in even the most demanding military operational specialties,” he said.

During the summit, members of the tri-service community disseminated new research and evidence-based practice findings and focused on future research and policy needs related to servicewomen. A poster session was paired with live talks from a variety of subject matter experts. Speakers included COL (ret) Lori Trego, PhD, CNM, FAAN, a founding member of the TSNRP Military Women’s Health Research Interest Group (WHRIG), who was integral in organizing the 2014 summit, and presented her work, “A Delphi Study to Determine Military Women’s Health Research Priorities.”

In the study, an advisory group of subject matter experts was tasked with compiling a list of topics of priority to address research gaps in military women’s health, ultimately creating the 2021 Military Women’s Health Research Agenda (MWHRA). Final recommendations included five categories of priorities to be promoted as part of the agenda. They include: reproductive health, violence against women, behavioral health, general health promotion, and chronic conditions.

“Because the MWHRA is evidence based, there is a high likelihood that findings from future research will contribute to improving the readiness of women in the military, the training and education of healthcare professionals to care for them, and the ability of the military health system to fulfill their health needs,” Trego said.

By conducting research that fills relevant gaps in knowledge in each topic, scientists will be able to progress from discovery to implementation science that can produce pertinent results in this population, Trego added.

The MWHRA has already had an impact – since completion of the study, the Defense Health Board (DHB) produced a report in November 2020 providing recommendations on how the DoD could best identify, prioritize, and implement research on specific active-duty women’s health issues. Findings from the Delphi study were key in the DHB investigation, Trego said. Future research guided by the MWHRA could address DHB recommendations on improving incidences of musculoskeletal injuries, urogenital infections, unintended pregnancies, sexual and intimate partner violence, and anxiety, depression, adjustment disorders, and eating disorders.

Trego urged researchers “to consider collaboration and advocacy for future research that addresses the priorities” in the MWHRA, adding that the WHRIG at TSNRP has a database of 50 multidisciplinary researchers who are willing to collaborate.

To further identify gaps for female service members serving in the military, focus group sessions led by course planners were held on days one and three of the summit. Focused discussion sessions addressed relevant topics including: urogenital health, unintended pregnancy, contraception, nutrition, iron deficiency anemia, traumatic brain injury, as well as the role of the military health system and providers to support servicewomen.

To close the summit, poster award winners were announced, with the Outstanding Poster Award presented to Maj Angela Phillips, USAF, NC, PhD, for her work examining the literature on healthcare disparities in perinatal outcomes for military women. Though Phillips found that for beneficiaries of the Military Healthcare System (MHS) and TRICARE,

outcomes were better than in the civilian population, Black women still experienced worse outcomes than White women for every perinatal condition, including Cesarean birth, hypertension in pregnancy, low birthweight, neonatal mortality, and preterm birth. Phillips found that for Black women affiliated with the U.S. military, who would have stable incomes, housing, and access to the MHS, racial disparities are still apparent. This suggests that factors other than social determinants of health are associated with worse outcomes in pregnancy, childbirth, or postpartum for Black women and infants. Additional research is needed to examine the etiology of racial and ethnic disparities among MHS beneficiaries, Phillips concluded.

Jessica L. Kegel, MA, earned second place in the poster contest, for her work on a sex-based comparison of self-reported health and wellbeing trends in the Army. Kegel collected data from the Global Assessment Tool (GAT) to assess changes in health behaviors among soldiers, stratified by sex, from 2014 to 2018. She noted several positive health trends in both men and women, including a decrease in hazardous drinking and tobacco use, though a smaller decrease was observed in female soldiers. Overall, Kegel found that female soldiers exhibited steady or declining rates in good nutritional habits. Recognizing the goal of improving lethality across the force, Kegel concluded that efforts to conduct sex-based comparisons should continue, as should initiatives to encourage positive health behaviors in female soldiers.

The third-place poster was presented by CDT Morgan Chewning-Kulick, B.S., whose ongoing study examines the limitations and gaps in training for female soldier trauma care. Chewning-Kulick found that soldiers are currently trained in Tactical Combat Casualty Care (TC3) only on male manikins, resulting in less competency in treating female combat casualties. If soldiers are not trained on female manikins, Chewning-Kulick posited, then a

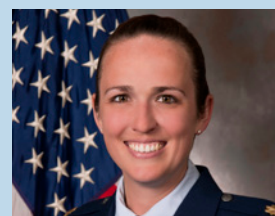
female soldier's life is at risk if she sustains a combat wound. In the study, participants less consistently placed chest seals correctly when treating female manikins for gunshot wounds. Most stated during a post-study survey that the Army's current TC3 training did not accurately prepare them to assess and treat female soldiers. Chewning-Kulick concluded that further research into the Army's TC3 training and its effectiveness to reflect gender integration is warranted.

The findings of this summit will be published in a journal supplement to further disseminate the important gaps in care for servicewomen and to serve as a call to action to continue to investigate and support this important population in our Armed Services. A special thank you to the planning committee who organized and supported this important summit and for all the presenters and participants who made this event a huge success.

## WIC Awards

### **Congratulations to the following Poster Presentation winners:**

**1st:** Racial Disparities  
in Perinatal Outcomes  
Among Beneficiaries  
of the U.S. Military  
Healthcare System: Maj  
Angela Phillips



**2nd:** Health and Well-Being in the Army: A Sex-  
Based Comparison of Self-Reported Trends from  
the Global Assessment Tool between 2014-2018:  
Ms. Jessica Kegel

**3rd:** Detecting Hesitation During Battlefield Wound  
Treatment on Female Soldiers: CDT Morgan  
Chewning-Kulick

# TOP FIVE TIPS FROM THE TSNRP GRANTS TEAM

*Jennifer Deluzio and Stephanie Martinez, TSNRP Grants Managers*

Common pitfalls plague the annual budgeting process. Keep these tips in mind to make the process easier for you and your team.

## **1 Be a good steward of funding!**

Surprised to see this as the first tip? Spend your funds as described in your approved budget. Your award is fully funded upon execution and these funds are dedicated to support your research or Evidence-Based Practice (EBP) projects. Funding allows you to execute a project you might not otherwise be able to conduct. Unspent funds are required to be returned to the US Treasury, not back to TSNRP.

## **2 Check the Budget Monthly:**

Per your Assistance Agreement, invoices must be submitted at least quarterly, not more frequently than monthly. Invoices must be submitted even if there are no expenses during that period. Become familiar with your Grantee Organization's accounting method. What kind of summaries do they provide? Track your own expenses and compare to those generated by the Grantee Organization.

## **3 Follow the Rules:**

Your Approved Budget (Award Document) outlines how the project intends to use funds. It was reviewed and approved prior to receiving your Assistance Agreement. Federal Acquisitions Regulations generally do not allow for the purchase of food or per diem for government travelers. If you need to move funds from one category to another within your budget, it could be allowable. TSNRP Terms and Conditions allow for up to 10% of budget to be moved to a different budget category. This is cumulative during your performance period. If the amount is

greater than 10%, it still may be possible to make changes. However, this modification requires prior TSNRP approval through an Award Change Request.

## **4 Consider No Cost Extensions Early:**

If you have enough money but not enough time, a No Cost Extension (NCE) may be a good option to maximize your budget. The first extensions are generally acceptable and account for most IRB delays. No Cost Extensions require approval and must be approved at least 30 days prior to your period of performance end. Please submit a request for a NCE to TSNRP at least 60 days prior to Period of Performance End. It is a good idea to indicate you are considering a NCE in your preceding annual report.

## **5 Ask for Help:**

Grantee Organizations such as The Geneva Foundation or the Henry Jackson Foundation, university offices of sponsored projects, and mentors or Fellow researchers can be great resources. Ask mentors and Fellow researchers about accounting methods that work. Use TSNRP as a resource and reach out to your Grants Manager. If we can't assist, we can put you in contact with someone who can.

### **TSNRP Grants Team is here to support you.**

Please reach out to either one of the TSNRP grants managers for assistance or questions:

**Jennifer Deluzio:**

[jennifer.deluzio.ctr@usuhs.edu](mailto:jennifer.deluzio.ctr@usuhs.edu) or

**Stephanie Martinez:**

[stephanie.martinez.ctr@usuhs.edu](mailto:stephanie.martinez.ctr@usuhs.edu)

# TSNRP VIRTUAL NURSING GRAND ROUNDS

The concept of a Virtual Nursing Grand Rounds was developed with the goal of providing additional opportunities for nurses to disseminate important findings for both research and Evidence-Based Practice (EBP) projects.

Although military nurses are located across the globe, presenting and discussing your research or EBP project with other nurses and members of the healthcare team is a powerful tool that can lead to a cascading positive effect in caring for service members and their beneficiaries.



**Here are just a few additional reasons to connect and disseminate research and EBP findings on a regular basis:**

- To challenge the status quo in clinical practice
- To stimulate new thoughts and patterns of thinking
- To make innovative contributions to nursing
- To advance the nursing profession
- To disseminate important clinical or operational information
- To mentor or inspire others
- To collaborate with others
- To change clinical practice or policy
- To leave your legacy on the nursing profession



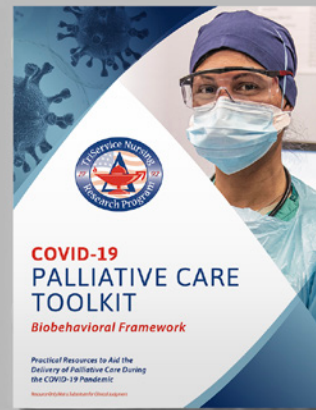
Maj Savannah Jumpp, NC, USAF, discussed her EBP project “An Evidence-Based Competency Training Program for Blood Product Administration” during a recent Nursing Grand Rounds presentation.

One of the most recent Virtual Nursing Grand Rounds in February 2021 featured Maj Savannah Jump, NC, USAF. Her EBP project “An Evidence-Based Competency Training Program for Blood Product Administration” replaced the standard knowledge-based training for blood product administration with an evidence-based blended educational intervention. This highly military relevant project increased self-confidence with the blood administration checklist and increased nurse satisfaction with the new educational intervention. Maj Jump’s project was incorporated AFMS-wide, integrated simulation scenario in the AF CMRP Clinical Nurse – 46NX Skills checklist, as well as posted on the Defense Health Agency Launchpad as a leading practice. Great job Maj Jump! Thank you for inspiring us with your EBP expertise!

As TSNRP seeks to advance the scholarship of military nurses, dissemination of scholarly work is just as important as conducting scholarly work and projects. Dissemination of that work is powerful as you may not immediately see the downstream effects. We are honored and excited to feature some inspirational nurses at Virtual Nursing Grand Rounds over the past few months. We encourage you to engage in dissemination efforts, both in listening to the work of others and in disseminating your own work. Challenge yourself to expand your academic knowledge, broaden your perspective, and advance our Military Healthcare System and the care of those entrusted to our care.



Dr. Denise Smart will discuss heat related illnesses during the June Nursing Grand Rounds.



## The COVID-19 Palliative Care Toolkit

The COVID-19 Palliative Care Toolkit was developed by the Biobehavioral Research Interest Group and Evidence-Based Practice Facilitators, TriService Nursing Research Program, September 2020

Lt Col Laurie Migliore USAF, NC, PhD, RN;  
Lt Col Sarah Huffman, USAF, NC, PhD, RN;  
Capt Erin Repko, USAF, NC, MSN; Ceferina Brackett, RN, BSN; Rebecca Heyne, PhD, DNP, MBA, RN; LeAnne Lovett-Floom, DNP, MSN, PHN-BC

This toolkit does not supersede DoD Policy.

The toolkit contents include the best information available at the time of publication. It is designed to provide basic palliative care information for frontline staff who do not routinely provide palliative care. It is not intended to define a standard of care and should not be interpreted as prescribing an exclusive course of management. Variations in practice will inevitably and appropriately occur when clinicians consider the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every healthcare professional making use of this toolkit is responsible for evaluating the appropriateness of applying it in the setting of any clinical situation.

**To receive a copy of the toolkit, email [shannon.sarino.ctr@usuhs.edu](mailto:shannon.sarino.ctr@usuhs.edu).**

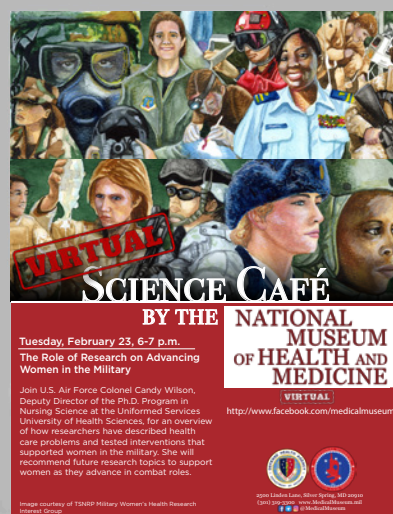
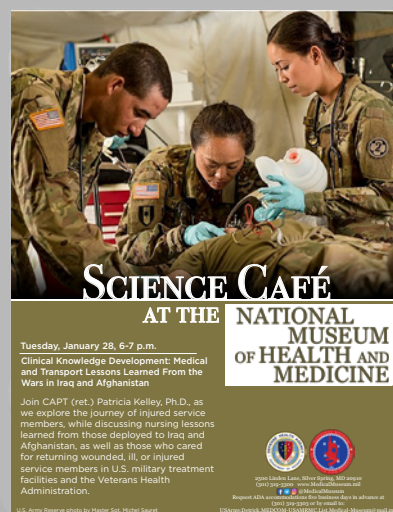
# MEDICAL MUSEUM SCIENCE CAFÉ SHARE TRIUMPHS AND CHALLENGES OF MILITARY NURSES

*Andrea Schierkolk, Public Program Manager,  
National Museum of Health and Medicine*

Through collections, exhibits, and public engagement, the National Museum of Health and Medicine (NMHM) shares the value of the nation's investment in military medicine. Established as the Army Medical Museum in 1862 as a repository for specimens, artifacts, and records related to Civil War medicine, NMHM has evolved into a TriService museum with a mission to preserve and explore the impact of American military medicine.

NMHM is a division of the Defense Health Agency J-9 Research and Development Directorate. Now in its ninth home, the museum was in Ford's Theatre, the National Mall, and most recently, Walter Reed Army Medical Center (WRAMC).

In fall 2011, before the reopening, NMHM premiered a new program called the Medical Museum Science Café as a way to maintain continuity of operations. Taking place at the Silver Spring Civic Building at Veterans Plaza, the Café presentations brought together members of the community, NMHM volunteers, military and public health professionals, students, and lifelong learners with an interest in the history of medicine and specifically, the history and future of American military medicine. When the new museum opened to the public, the program migrated to the new space, providing an opportunity for staff to identify artifacts related to Café topics and share



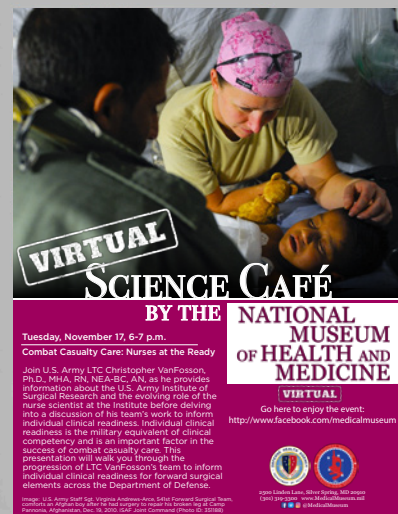
them with attendees, many times offering a rare glimpse of items not currently on display. To this day, the science Cafés continue to provide a forum where members of the community come together to learn about a variety of topics related to military medicine.

Some Cafés focus on the history of military medicine and may coincide with commemorative events. The 150th anniversary of President Lincoln's death presented an opportunity to bring together a panel of speakers, including the District of Columbia Medical Examiner and the Armed Forces Medical Examiner, to discuss Lincoln's care by Army physicians in his last hours. The discussion also examined whether Lincoln might have survived if certain medical advancements, like acute trauma care, were available. This talk coincided with a special exhibit of artifacts related to Lincoln's death and autopsy, including the bullet that killed Lincoln. Other Cafés focus on lessons learned and the current state of military medicine.

Even during the COVID-19 pandemic, the Medical Museum Science Café series continues, drawing even larger and more diverse audiences by going virtual. During the pandemic, when the museum is closed, the program takes place monthly as a Facebook event. Once the museum reopens, plans are to continue offering the program in a hybrid fashion with both onsite and online components.

The Medical Museum Science Cafe has enjoyed the military nurses who have presented their research and expertise with our staff, community members, and volunteers.

**To suggest topics or are interested in presenting for future Medical Museum Science Cafés, please contact NMHM at [www.medicalmuseum.mil](http://www.medicalmuseum.mil). View past and current science Cafés @medicalmuseum on Facebook.**



The posters on this and the previous page are TSNRP-sponsored speakers that have given Science Café talks either in person or virtually since 2019.



# MILITARY HEALTH SYSTEM RESEARCH: A DEFENSE HEALTH AGENCY (DHA) PROGRAM

*Dr. Diana Luan, PhD Program Manager, Military Health System Research Program Defense Health Agency*

Health system research utilizes data to understand how social factors, financial systems, organizational structures and processes, health technologies, and personal behaviors affect the quality and cost of healthcare, and ultimately, the health and well-being of patients. This research is mostly data driven research, utilizing the data generated by the health system to improve the health system. The J-9 Research and Development (R&D) Directorate established the Military Health System Research (MHSR) Program in order to enable capacity and capability to conduct healthcare delivery research. The goal of the MHSR is to optimize healthcare delivery and improve beneficiary health through data-driven evidence, which directly supports the DHA quadruple aim of improved health readiness, better health, better care, and lower cost.

Health system research is different from basic and clinical medical research. It is about the delivery of care. MHSR is focused on studies at the system level that provide information about factors that impact the healthcare delivery, systematic factors that potentially drive demand, supply, utilization, costs, variation, and outcomes.

In September 2019, the MHSR Program awarded the six DHA research grants (intramural and extramural proposals) to improve care, health and military health readiness. The intramural awardees were the Naval Health Research Center, Naval Postgraduate School, and the Army Institute of Surgical Research. The extramural grant recipients were Dartmouth College, Brown University, and the Pennsylvania State University. The six principal investigators (PIs)



were selected from an initial 50 applicants through a two-tier DHA J-9 grant review process. The three extramural proposals The six principal investigators (PIs) were selected from an initial 50 applicants through a two-tier DHA J-9 grant review process. The three extramural proposals were funded to examine: geographic, utilization and cost variation within two MHS populations; the impact of change of duty stations on cancer prevention; and the effect of cost sharing on medication adherence. The intramural PI research proposals include: the burden of disease for musculoskeletal conditions; access to care and emergency department utilization; and variation in mental healthcare capacity.

The MHSR Program issued a second Notice of Funding Opportunity (NOFO) on 1 February 2021. The intent is to issue a NOFO at the beginning of each calendar year with decisions made by September. Funding will

occur in the October timeframe to allow for full use of research funds. The major focus of all MHSR projects will be the utilization, costs, quality, accessibility, delivery, organization, financing, and outcomes of healthcare services to increase knowledge and understanding of the structure, processes, and effects of health services for individuals and populations (IOM, 1995). It also considers the impact of policies, social factors, financing systems, organizational structures and processes, health technologies, and behaviors on the delivery of healthcare in MHS. The desired research outcomes are actionable insights for decision-making and policy recommendations.

**All proposals must address at least one MHSR research priority and one clinical priority area.**

**For answers to any questions please email:**  
[dhancr.j-9.mbx.hsr@mail.mil](mailto:dhancr.j-9.mbx.hsr@mail.mil).

**For more details about the current funding opportunity go to:** [www.grants.gov/](http://www.grants.gov/)

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## ***SEND US YOUR STORIES***

We would be happy to share your successes and achievements on the TSNRP social media channels, especially as they relate to military nursing scholarship! If you've recently returned from deployment, we'd like to highlight that work, as well.

Send your publications, recent accomplishments, and photographs to Shannon Sarino at [shannon.sarino.ctr@usuhs.edu](mailto:shannon.sarino.ctr@usuhs.edu), and we'll highlight your great work. Items should be no more than 350 words, and photos should be in JPEG format with text identifying the "who, what, when, and where" of the photograph's subject.

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### **The MHSR Research Priorities**

Health System Reform  
Economics and Cost  
Quality  
Outcomes  
Variation  
Health Readiness

### **Clinical Priority Areas**

Behavioral Health  
Cardiovascular Care  
Complex Pediatrics  
Critical Care/ Trauma  
Dental  
Military-Specific Care  
Neuro-musculoskeletal  
Oncology  
Primary Care  
Surgical Services  
Women and Infant

### **Clinical Areas**

Behavioral Health  
Cardiovascular Care  
Complex Pediatrics  
Critical Care/ Trauma  
Dental  
Military-Specific Care  
Neuro-musculoskeletal  
Oncology  
Primary care  
Surgical Services  
Women and Infant



## **WELCOME OUR NEW GRANTS MANAGER JENNIFER DELUZIO**

Jennifer Deluzio is excited to join the TSNRP team as a grants manager. For more than a decade, she supported military health research, primarily serving as research coordinator on Department of Defense funded research ranging from musculoskeletal injury prevention to behavioral health intervention. Jennifer brings experience coordinating health promotion programs on the university level. She is a certified clinical research coordinator and holds a certificate in grants writing.

Jennifer earned a bachelor's degree in public health studies from Johns Hopkins University and a master's degree in health and human performance from Austin Peay State University. She enjoys working with the TSNRP team and investigators, learning about the impactful projects funded by the TSNRP, and looks forward to virtual and in-person events. Fun fact about Jennifer: she rode a bicycle from Baltimore, MD to San Francisco, CA. Welcome Jennifer!



## **WELCOME OUR NEW GRANTS MANAGER STEPHANIE MARTINEZ**

TSNRP is pleased to welcome Stephanie Martinez, BA, CPH, as a new grants manager.

Before joining the TSNRP Grants Team, she was the grants and contracts specialist for the Department of Emergency Medicine at The University of Texas Health Science Center at San Antonio. Stephanie worked closely with several military and civilian researchers ranging in experience from medical residents to highly seasoned investigators. In her

tenure with emergency medicine, she managed a \$2.6M Department of Defense award studying the use of topical Vancomycin in open long bone fractures called "Placement of Antibiotic Powder in Wounds During the Emergency Room (POWDER)."

An avid runner, Stephanie set a personal record as participant of the 2018 Marine Corps Marathon and hopes to return to the next race. Stephanie already made a huge contribution to the TSNRP team, and we look forward to seeing her involvement with our principal investigators!



## **WELCOME OUR NEW ADVISORY COUNCIL MEMBER MAJ MORGAN TORRIS MARTINEZ**

TSNRP is pleased to welcome MAJ Morgan Torris to the Advisory Council as the Army Reserve member.

MAJ Torris, Ph.D., MPA, RN, CEN, PHNA-BC, NHDP-BC, FAWM, is an Assistant Professor in the School of Nursing at Linfield University in Portland, Oregon. Before going to Linfield, he worked at the University of Hawaii on a Department of Defense funded

grant exploring military nurse training modalities.

As a Masters student, MAJ Torris was involved with the Hawaii Research Center for Futures Studies. He is a nurse educator with experience teaching undergraduate and graduate students. His teaching interests include sense-making, the social aspects of understanding, and the application of knowledge.

MAJ Torris' clinical background includes emergency, critical care, wilderness medicine, and disaster response. His doctoral research explored community perception of risk for the consequences of natural disasters. He has been actively involved in disaster response for more than ten years as a member of Hawaii's Disaster Medical Assistance Team and has served as a disaster subject matter expert with the United States Army.

MAJ Torris is a Public Health Nurse assigned to the 396th Combat Support Hospital in Vancouver, Washington.



## TSNRP BIDS FAREWELL TO KESHA CHANDLER & EMILY BELL

We said good-bye to two staff members in early 2021, and while we will miss their contributions to the TSNRP community, we are looking forward to their continued successes!

Kesha Chandler, TSNRP Grants Manager, moved to a new position at the Uniformed Services University in early 2021. While at TSNRP, Kesha was instrumental in the creation and testing of the new grants database, as well as providing excellent customer service to our Principal Investigators in the execution of their awards. We will miss her innovation and attention to detail.



Emily Bell, Nursing Program Research Coordinator, left her full-time position with TSNRP in late April 2021 to return to pediatric research as Research Nurse Program Manager at Illingworth (Syneos). Although she will remain with TSNRP in a limited capacity until a new Nursing Program Research Coordinator transitions into the position, we will miss her organization, willingness to step in to any role as needed, and expertise. Emily was a vital part of growing the RIGs, as well as working to organize the February 2021 Women in Combat Summit.

We look forward to seeing what both Kesha and Emily do in the future to contribute to nursing research!

## KUDOS

### **Congratulations to our community members on the following accomplishments:**

LTC Christopher Stucky received 1st place for his poster presentation “The Paradox of Network Inequality: Differential Impacts of Status and Influence on Surgical Team Communication” at the 15th Annual Womack Army Medical Center Research Symposium.

LTC Christopher H. Stucky on his appointment as Consultant to The Surgeon General, 66E Perioperative Nursing, effective 1 May 2021.

COL Susan G. Hopkinson is retiring in August 2021 after 27 years of exemplary service as an Army Nurse Corps officer. Thank you for your service!

MAJ Patricia Schmidt was a By Name Request to fill a newly established Nurse Scientist position at the Telehealth & Advanced Technology Research Center, US Army Medical Research and Development Command; Ft. Detrick, MD. Congratulations!

MAJ Patricia Schmidt was a By Name Request to fill a newly established Nurse Scientist position at the Telehealth & Advanced Technology Research Center, US Army Medical Research and Development Command; Ft. Detrick, MD. Congratulations!

LTC Pauline Swiger on her recent appointment as Consultant to the Army Surgeon General, Nursing Research. Congratulations!

Lt Col Cubby Gardner was recently appointed Consultant to the Air Force Surgeon General, Nursing Research. Congratulations!

Col Jennifer Hatzfeld was recently selected as Senior Executive Officer to the Air Force Surgeon General. Congratulations!

## PUBLICATIONS

Agazio, J, Cunningham, C. & Amos-Mejia, D. (2020). Military parents' perceptions of separation for their younger children. *Journal of the American Association of Nurse Practitioners*, (in press).

Beaumont, D., Johnson, M., Hensler, J.G., Blouin, D., O'Sullivan, J., Johnson, D. Tibial Intraosseous and Intravenous Administration of Epinephrine in Normovolemic and Hypovolemic Cardiac Arrest. *EC Anesthesia*, 6 (4): 10-17, 2020.

Beaumont D, Johnson M, Hensler JG, Blouin D, O'Sullivan J, Johnson D. Tibial Intraosseous, Intravenous, and Endotracheal Epinephrine Administration in a Hypovolemic Cardiac Arrest Model. *International Journal of Medical Science and Health Research*, Volume 4, Issue 6, 2020. <http://ijmshr.com/view/6/2020>

Boltz, J., Del Re, A.C., Koenig, H., Schmied, E., McRoy, R. M., & Yablonsky, A. M.(2020). Caregiver health: An epidemiological study of active duty parents with special needs children. *Military Behavioral Health*, 8 (4), 364-377. doi:10.1080/21635781.2020.1825242

Buonora J, Custer J, Villamin K, Schumacher J, Simpson H, La Fave J, Valdivieso D, Ceremuga T. Effects of pregabalin on gene expression in the amygdalae and hippocampi of rats exposed to post-traumatic stress, *Current Trends in Neurology*, 13:27-47, 2019.

Ceremuga T, Ayala M, Henson D, Chicoine R, Celestino J, Chun S, DeGroot J, Glynn A, Randall S, Stanley L, and Beaumont D. Assessment of Military Personnel, Veterans, and Family Taking Herbal Supplements, *AANA Journal*, 88(3): 191-202, 2020.

Choi KH, Berman RY, Zhang M, Spencer HF, Radford KD. Effects of Ketamine on Rodent Fear Memory. *Int J Mol Sci*. 2020 Sep 28;21(19):7173. doi: 10.3390/ijms21197173. PMID: 32998470; PMCID: PMC7582895.

McCarthy MS, Elshaw EB, Szekely BM, Beltran, T. Novel phototherapy kiosk shows promise as a treatment option for low vitamin D. *Military Medicine*. In press, September 2020.

Neill MJ, Burgert J, Blouin D, Tigges B, Rodden K, Roberts R, Anderson P, Hallquist T, Navarro J, O'Sullivan J, Johnson D. Effects of Humeral Intraosseous Epinephrine in a Pediatric Hypovolemic Cardiac Arrest Porcine Model. *Trauma Surgery & Acute Care Open*. Feb 2020, 5(1) e000372; DOI: 10.1136/tsaco-2019-000372.

O'Neill, A.M.S., Mohr, C.D., Bodner, T., & Hammer, L. (In Press). Perceived Partner Responsiveness, Sleep and Pain: A Dyadic Study of Military-Connected Couples. *Health Psychology*.

Oner, B., Zengul, F., Oner, N. & Ivankova, N., Karadag, A., Patrician, P.A. (2020). Nursing-Sensitive Indicators for Nursing Care: A Systematic Review (1997-2017), (Accepted for Publication September 9, 2020), *Nursing Research-Open Access*.

Radford KD, Spencer HF, Zhang M, Berman RY, Girasek QL, Choi KH. Association between intravenous ketamine-induced stress hormone levels and long-term fear memory renewal in Sprague-Dawley rats. *Behav Brain Res*. 2020 Jan 27;378:112259. doi: 10.1016/j.bbr.2019.112259. Epub 2019 Sep 24. PMID: 31560919.

Radford KD, Berman RY, Zhang M, Wu TJ, Choi KH. Sex-related differences in intravenous ketamine effects on dissociative stereotypy and antinociception in male and female rats. *Pharmacol Biochem Behav*. 2020 Dec;199:173042. doi: 10.1016/j.pbb.2020.173042. Epub 2020 Sep 22. PMID: 32976859.

Stucky CH, De Jong MJ, Kabo FW, Kasper CE. A Network Analysis of Perioperative Communication Patterns. *AORN J*. 2020;111(6):627-641.

Stucky CH, De Jong MJ, Kabo FW, Huffman, SL. A Protocol to Examine Surgical Team Communication in a Large Military Medical Center. *Nurs. Res.* 2020. Published Ahead of Print.

Taylor-Clark, T.M. & Patrician, P.A. (2020). Soldier-centered care: A concept analysis. *Military Medicine*, 185(3-4), e422-e430. Doi: 10.1093/milmed/usz448

Taylor-Clark, T. M., & Patrician, P. A. (2020, Summer Issue Pending). Soldier-centered care: A concept analysis. *Military Medicine*, Military Health System Research Symposium Supplement

Taylor-Clark, T.M., Swiger, P.A., Anusiewicz, C.V., Loan, L.A., Olds, D.M., Breckenridge-Sproat, S.T., Raju, D., Dickinson, C., Patricia P.A. (2020, Summer Issue Pending). The importance of nursing work environments and job satisfaction in reducing preventable nurse turnover. *Journal of Nursing Regulation*.

Wilson, M.A., Cutcliffe, J.R., Armitage, N.H. & Eaton, K.N. (2020). Moral Distress in the Critical Care Air Transport Nurse. *Nursing Outlook*, 68 (1), 33-44. July DOI: 10.1016/j.outlook.2019.07.003

Yablonsky, A.M., & Lamson, A. (2020). Healthy military families 2020. *Military Behavioral Health*, 8 (4), 361-363. doi: 10.1080/21635781.2020.1825244

Yauger YJ, Beaumont DM, Brady K, Schauer SG, O'Sullivan J, Hensler JG, Johnson D. Endotracheal Administered Epinephrine Is Effective in Return of Spontaneous Circulation Within a Pediatric Swine Hypovolemic Cardiac Arrest Model. *Pediatr Emerg Care*. 2020 Jul 21. doi: 10.1097/PEC.0000000000002208. Epub ahead of print. PMID: 32701868.

Yauger YJ, Johnson MD, Mark J, Le T, Woodruff T, Silvey S, Revis J, Blouin D, O'Sullivan J, Brady K, Hensler JG, Johnson D. Tibial Intraosseous Administration of Epinephrine Is Effective in Restoring Return of Spontaneous Circulation in a Pediatric Normovolemic But Not Hypovolemic Cardiac Arrest Model. *Pediatr Emerg Care*. 2020 May 22. doi: 10.1097/PEC.0000000000002127. Epub ahead of print. PMID: 32453255.

## PRESENTATIONS

Ayala, M, Beaumont, D, Ceremuga, T. Exploration of Predictive Modeling of Defense Health Agency (DHA) & Veterans Affairs (VA) Beneficiaries' Dietary Supplements Use. Abstract accepted for presentation at the **AANA Congress "State of the Science"** virtual podium presentation, August 14-18, 2020.

Ayala M, Beaumont D, Ceremuga T, Exploration of Predictive Modeling of DHA & VA Beneficiaries Dietary Supplements Use. **AVANA Annual Meeting**, San Antonio, TX. 14-17 May 2020. Meeting cancelled due to COVID-19 pandemic.

Ayala, M, Beaumont, D, Ceremuga, T. Exploration of Predictive Modeling of Defense Health Agency (DHA) & Veterans Affairs (VA) Beneficiaries' Dietary Supplements Use. **AANA Congress "State of the Science"** virtual poster session, August 14-18, 2020.

Blasko, K., Park, A., Gorman, G. (2020, August 17-21). Family Readiness: An Essential Building Block in Total Force Fitness. Poster presentation at the **2020 Military Health System Research Symposium**, Kissimmee, FL (Conference cancelled due to COVID).

Brickell, T., Wright, M., French, L., Lippa, S., Sullivan, J., Bailie, J., Lange, R. (2020, August 17-21). Resilience is Associated with Health-Related Quality of Life in Caregivers of Service members and Veterans Following Traumatic Brain Injury. Poster presentation at the **2020 Military Health System Research Symposium**, Kissimmee, FL (Conference cancelled due to COVID).

Burrell D, Rey A, Baughn T, Valdivieso D, Canavati U, Trotter C, Ceremuga T. Pregabalin (Lyrica®) Prophylactic Effects on Neurobehavior in a Rat Model of PTSD. **AVANA Annual Meeting**, San Antonio, TX. 14-17 May 2020. (Conference cancelled due to COVID).

Corry, N., Joneydi, R., McMaster, H., Williams, C., Glynn, S., Spera, C., Stander, V. (2020, August 17-21). Separation from the Military and Spousal Well-Being. Oral presentation at the **2020 Military Health System Research Symposium**, Kissimmee, FL (Conference cancelled due to COVID).

Heartwick K, Harless J, Springer J, Gray O, Khan J, and McCarthy M. Team fitness tracker – Feasibility of an mhealth solution to enhance Soldier health and readiness. Accepted as conference poster. **Military Health Services Research Symposium**, (Conference cancelled due to COVID).

Huffman, S., Jeschke, E.A., & Flarity, K. Impact of Warrior Identity on En Route Care Teams: A Novel Method for Studying Readiness & Retention. **Military Health System Research Symposium Podium** (Conference canceled presented orally at 2020 En Route Care Research Symposium at AFRL 24-26 August 2020).

Huffman, S., Jeschke, E.A., & Flarity, K. Impact of Warrior Identity on En Route Care Teams: A Novel Method for Studying Readiness & Retention. **University of Colorado, Denver; Anschutz Center for COMBAT Research Symposium Podium** (virtual).

Hunter, M.A., Boltz, J. E., & Yablonsky, A. M. (2020, August 17-21). Deployment-related factors differentially predict facets of parenting stress within

Navy parents. Oral presentation at the **2020 Military Health System Research Symposium**, Kissimmee, FL (Conference cancelled).

Jeschke, E.A., PhD, Flarity, K., Huffman, S. Remembering the Remarkable in Regular Resilience: The limits of military resilience in relationship to warrior identity formation. (2020, Oct 16-17) **2020 APA Division 19 Military Psychology Summit During COVID-19** (virtual) Poster Session.

Johnson AD, Yauger J, Johnson M, Beaumont D, Hensler JG, O'Sullivan J, Blouin D, Neill M, Kertes S. Effects of Humerus and Intravenous Epinephrine Administration on Area Under the Curve and Survivability in Cardiac Arrest Model in Swine. Abstract accepted. **Military Health System Research Symposium**, August 24-27, 2020. Meeting cancelled due to COVID-19 pandemic.

Johnson AD, Beaumont D, Yauger J, Neill M, O'Sullivan J, Hensler JG, Blouin D, Kertes S, Johnson M. Effects of Humerus and Intravenous Epinephrine Administration in a Hypovolemic Pediatric Cardiac Arrest Model in Swine. Abstract accepted. **Military Health System Research Symposium**, August 24-27, 2020. Meeting cancelled due to COVID-19 pandemic.

Kertes S, Yauger J, Beaumont D, O'Sullivan J, Johnson M, Blouin D, Neill M. Effects of Endotracheal Administration of Epinephrine in Cardiac Arrest of Adult and Pediatric Swine. Abstract accepted. **Military Health System Research Symposium**, August 24-27, 2020. Meeting cancelled due to COVID-19 pandemic.

Killian, J., Weis, K., Lutendorf, M., Walker, K., Chen, W. (2020, August 17-21). Preliminary Results for DoD-Funded Prenatal Support Program Fostering Adaptive Transitions for Motherhood to Support Warfighter Readiness at Three Major Military Installations. Oral presentation at the **2020 Military Health System Research Symposium**, Kissimmee, FL (Conference cancelled).

McCarthy MS, Elshaw E, Szekely BM, Beltran, T. A feasibility study comparing a photobiologic therapy

kiosk to oral supplementation to promote vitamin D sufficiency. Conference poster. **International Congress on Soldier Physical Performance**, Quebec, City, Canada. February 12, 2020.

McCarthy MS, Elshaw EB, and Szekely B. Feasibility of Phototherapy as a Community-Based Solution for Vitamin D Deficiency. Peer-reviewed poster session at **Virtual Western Institute of Nursing 53rd Annual Communicating Nursing Research Conference**. Portland, OR. April 17, 2020.

McCarthy MS, Elshaw E, Szekely BM, Deschamps B, Gillette L, Colburn Z, Tommas NJ. Precision nutrition impact on health-related behavior change in Service Members. Conference poster – narrated. **Virtual Council for the Advancement of Nursing Science Meeting**, Washington, D.C. September 18, 2020.

McCarthy MS, Elshaw E, Szekely BM, Deschamps B., Gillette L., Colburn Z., Tommas NJ, and Langevin S. Precision nutrition impact on health-related behavior change in Service Members. Conference poster – narrated. **Virtual Nutrition 2020 - American Society of Nutrition Conference**, Seattle, WA. June 2, 2020.

McCarthy MS, Elshaw E, Szekely BM, Deschamps B, Tommas, N., Colburn Z, and Gillette, L. Precision nutrition impact on health-related behavior change in active duty Service Members. Conference poster. **Madigan Army Medical Center Virtual Research Day**, May 18, 2020, Tacoma, WA.

Mehallow S, Beiswanger L, Buonora J, Butler A, Lehtonen R, Ceremuga T. Investigation of L-Theanine and Plasma Biomarkers in a Rodent PTSD Model. Virtual oral presentation, **the Georgia Association of Nurse Anesthetists Annual Meeting**, October 4, 2020.

Stucky CH. Q&A Surgical Safety and Communication: Latest Trends. **AORN Surgical Safety Initiative**. Presented June 30, 2020, Association of Perioperative Registered Nurses.

VanFosson, C. A., “Combat Casualty Care: Nurses at the Ready,” **National Museum of Health and**

**Medicine Science Café**, online webinar, 17 November 2020

VanFosson, C. A., “Improving Nurse Readiness for Combat Casualty Care,” **2020 Defense Health Agency Nurses’ Week Celebration**, online webinar, 4-12 May 2020

Wilson, M.A. Refinement and Testing of a Moral Distress Tool for Military Critical Care Nurses. **En Route Care Research Symposium**. Podium, Regional. August 2020.

Yablonsky, A.M., Boltz, J.E., & Hunter, M. (2020, December 6-10). Deployment-related factors differentially predict facets of parenting stress within Navy parents. Oral presentation at the **129th AMSUS Annual Meeting**, National Harbor, MD.

Yauger Y, Johnson MD, Mark J, Le T, Woodruff T, Silvey S, Blouin D, O’Sullivan J, Brady K, Hensler J, Johnson D. Tibial Intraosseous Administration of Epinephrine is Effective in Restoring ROSC in a Pediatric Normovolemic But Not Hypovolemic Cardiac Arrest Model. Abstract accepted for presentation at the **AANA Congress “State of the Science”** virtual poster session. August 14-18, 2020.

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Yauger YJ, Beaumont DM, Brady K, Schauer SG, O’Sullivan J, Hensler JG, Johnson, D. Endotracheal Administered Epinephrine is Effective in Restoring ROSC Within a Pediatric Swine Hypovolemic Cardiac Arrest Model. Abstract accepted. **Military Health System Research Symposium**, August 24-27, 2020. Meeting cancelled due to COVID-19 pandemic.

## TSNRP Mini EBP Awards

PL RANK	PL	PL BRANCH	TITLE
MAJ	Colleen Bye	Army	Implementation of Ambulatory Blood Pressure Monitoring for Hypertension Diagnosis in the Primary Care
Maj	Holly Holko	Air Force	Implementing Badge Buddies to Hospital Staff ID Cards
Capt	Jorge Montequin	Air Force	Decreasing Preoperative Anxiety through Utilization of Music Medicine
Maj	Marlon Saria	Air Force	Reserve Airmen with Duty-Limiting Conditions: Optimizing Patient Education (Discharge Instructions) to Improve Readiness
COL	Alicia Madore	Army	Nurse Led Clinic (NLC) Sexual eHealth and Wellness
LT	Joseph Dimarucut	Navy	Enhanced Recovery for Elderly Surgical Patients Receiving General Anesthesia
Capt	Brian Machi	Air Force	Obese active duty patients enrolled in the Warrior Medicine Practice Clinic
LTC	William Murray	Army	Establishing an Evidence-Based Practice Council for Military Treatment Facility in Europe
MAJ	Wendy Hamilton	Army	Implementation of a Mock Code Program
LT	Elizabeth Gallegos	Navy	Perioperative Emergency Manual Training Program
LT	Alainna Crotty	Navy	Leaf to Reduce Pressure Injuries at a Military Treatment Facility
1LT	Ryan Williams	Army	In the Vein: Utilization of a vein visualization device to increase successful peripheral catheter placement
LTC	Kyong Hyatt	Army	Effect of Battlefield Acupuncture vs. Transcutaneous Electrical Nerve Stimulation for Chronic Low Back Pain of Service Members
1Lt	Catherine Bly	Air Force	Skin Care Integrity Bundle Approach: In hospitalized patients, the implementation of evidence-based skin care bundles and on-going staff education to support patient skin integrity
Maj	Lydia Rodriguez	Air Force	Building Resiliency in Pregnancy: A Multidisciplinary Approach

## TSNRP FY21 Awards

PI	BRANCH	SERVICE	TITLE
MAJ Justin Miller	Army	Active Duty	Clinical Workflow Factors in Whole Blood Versus Blood Component Transfusion
MAJ Tanisha Currie	Army	Active Duty	Effects of Blackcurrant Supplements on CVD Biomarkers and Mood in the Military
MAJ Chandler Moser	Army	Active Duty	Tracheostomy-related injury in military and civilian patients during COVID-19
CAPT Lisa Osborne-Smith	Navy	Retired	A Retrospective Review of One Lung Ventilation for Traumatic Pulmonary Injury
COL Patricia Patrician	Army	Retired	Impact of Nursing on Patient Experience in Military Hospitals
CAPT Abigail Yablonsky	Navy	Active Duty	Operational Exposures and Parenting Alliance in the Millennium Family Cohort
CDR Kennett Radford	Navy	Active Duty	Role of IV Ketamine on Neuroinflammation & Opioid Use following TBI in Rats
LTC Pedro Oblea	Army	Active Duty	Impact of Hydrocolloid Barrier as Facial Skin Protectants Among Healthcare Worker
MAJ Melissa Miller	Army	Active Duty	Qualitative Exploration of the Military Nurse Practice Environment
Col Laura Talbot	Air Force	Retired	Home Therapies for Musculoskeletal Injury in A/D: Systematic Review/Meta Analysis
CAPT Catherine Cox	Navy	Retired	Nursing on the Ocean Blue: Navy Aircraft Carrier, Fleet Surgical Team and Hospital Ship Nurses' Response to COVID-19
MAJ Mary McCarthy	Army	Retired	A Precision Health Trial to Reduce Illness & Promote Resilience in Hospital Staff
LTC Patricia Hodson	Army	Active Duty	Developing an Evidence-Based, Joint Military Nursing Professional Practice Model

\* Awards Issued as of May 1

## KEY CONTACTS

Research specialty leaders and Consultants are a valuable resource for current research requirements and initiatives throughout the military, the U.S. Department of Defense, and the Federal Nursing Services Council.

### SPECIALTY LEADERS

#### U.S. ARMY

**COL Angela Simmons, AN, USA, PhD, RN, NEA-BC**

AMEDD Center & School Health  
Readiness Center of Excellence  
Dean, School of Nursing Science  
Chief, Dept. of Nursing Science

#### U.S. NAVY

**CAPT Michele Kane, NC, USN**

Uniformed Services University of the  
Health Sciences  
Assistant Professor, Daniel K. Inouye  
Graduate School of Nursing

**CDR Wendy Cook, NC, USN, PhD, RN**

Assistant Specialty Leader Naval  
Medical

#### U.S. AIR FORCE

**Col Jennifer Hatzfeld, NC, USAF PhD, RN, APHN-BC**

Director of Air Force Nursing  
Operations  
Air Force Medical Readiness Agency  
Defense Health Headquarters

### TSNRP ADVISORY COUNCIL

#### ACTIVE DUTY

**LTC Christopher (Chris) A. VanFosson, AN, USA**

Chief, Clinical Research Support Department, United  
States Army Institute for Surgical Research, Joint Base  
San Antonio - Fort Sam Houston, Texas

**Col Susan F. Dukes, USAF, NC**

Interim Dean, US Air Force School, Aerospace Medicine  
Wright-Patterson Air Force Base, Ohio

#### RESERVE

**Col Edward Ronnebaum, USAFR, NC**

Chief, Wing Education and Training  
Lackland Air Force Base, San Antonio, Texas

Associate Professor, School of Nursing, Johanson County  
Community College, Overland Park, Kansas

**MAJ Morgan Torris-Hedlund, AN, USAR**

396th Combat Support Hospital, Public Health Nurse,  
Vancouver, Washington

Assistant Professor, Linfield Good Samaritan School of  
Nursing Portland, Oregon

**CAPT Judith Dye, NC, USN**

Commanding Officer, Expeditionary Medical Facility  
Great Lakes Assistant Professor APN Concentration Chair,  
San Diego University



Disclaimer: The views expressed in the articles contained in this publication are those of the author(s) and do not reflect the official policy or position of the Department of Defense or the U.S. Government

# UPCOMING EVENTS

Be on the lookout for TSNRP future courses and workshops available in 2021 (pending DoD travel and meeting guidance during the COVID-19 pandemic).

## EVIDENCE-BASED PRACTICE COURSE

June 7-9, 2021  
Madigan Army Medical Center

## TSNRP GRANT CAMP

July 12-16, 2021  
San Antonio, TX

## TSNRP SCIENTIFIC WRITING WORKSHOP

Virtual Meetings  
April, May, June, 2021  
June-August 2021  
In-Person Workshop  
July 19-21, 2021  
San Antonio, TX

## TSNRP RESEARCH AND EVIDENCE-BASED PRACTICE DISSEMINATION COURSE

September 3-16, 2021  
San Antonio, TX



The TriService Nursing Research Program is pleased to present

### Virtual Nursing Grand Rounds

Join the TSNRP for a Series of Virtual Nursing Grand Rounds, to promote the integration of research and evidence-based practice into everyday nursing practice.

**17 June 2021, 1100-1230 (EST)**

**Understanding exertional heat illness in the military:**

**Using Haddon's Matrix**

**Lt Col (Ret) Denise Smart**



All military nurses and nursing leadership are welcome. For CEUs, register at: <https://cvent.me/VNeRDe>  
Presentations will be available via Zoom; a link will be provided after registration. Sessions will also stream live at [www.facebook.com/triservicenursingresearchprogram](https://www.facebook.com/triservicenursingresearchprogram).



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